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Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Section 73.202(b),	)	MM Docket No. 05-101
Table of Allotments,	)	RM-11159
FM Broadcast Stations	)	
(Jackson, Wyoming)	)	

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Federal Communications Commission
Office of Secretary

To: Marlene S. Dortch, Secretary
Federal Communications Commission

ATTN: Assistant Chief, Audio Division
Media Bureau

COMMENTS

The University of Wyoming ("University"), by its attorneys, provides these comments in response to the *Notice of Proposed Rulemaking* in DA 05-653 (released March 14, 2005) ("*NPRM*"). In the *NPRM*, the Audio Division requests comment on a proposal by Jackson Hole Community Radio ("JHCR") to amend the Table of Allotments, 47 C.F.R. § 73.202(b), to allot Channel 294C2 at Jackson, Wyoming and to reserve it for noncommercial educational ("NCE") use. University respectfully submits these Comments in response.

I. BACKGROUND

University is the largest institution of higher learning in the state of Wyoming and has as its central purpose the education and edification of Wyoming citizens. To help fulfill its educational mandate, University owns and operates a network of public broadcasting stations across Wyoming to ensure that citizens living in this largely rural state have access to high-quality arts, cultural, political, social, and educational programming. This network includes NCE Station KUWJ(FM), Jackson, Wyoming.

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II. ISSUES

A. FCC's Legal Standards For Allocation of New NCE Stations Outside Of The Reserved Band

In the FCC's Second Report and Order in *Reexamination of the Comparative Standard for Noncommercial Educational Applicants*, 18 FCC Rcd 6691 (2003) (hereinafter "Second R&O"), the Commission set forth the criteria for allocating new noncommercial educational stations outside of the reserved band. A petitioner seeking to reserve a channel must first demonstrate that it is "technically precluded" from using an existing reserved band channel. *Second R&O* at ¶35. The "technical preclusion" element can only be met by showing that there is no other "location at which same-class reserved band NCE facilities could be licensed to the proposed community in compliance with NCE technical rules." *Second R&O* at ¶33. Assuming that the petitioner can demonstrate technical preclusion, it must then demonstrate that the proposed allotment would "provide a first or second NCE service to at least ten percent of the population within the proposed station's service area," and must demonstrate that this additional population numbers "at least 2000 persons." *Second R&O* at ¶34 (emphasis added).

B. Additional "First" and "Second" Services Under JHCR Proposal

1. JHCR's Proposed "Second" Service

JHCR's Petition states that its proposed station will "provide a second NCE service to significantly more than 10% of the population within the station's service area." *JHCR Petition* at 2. The engineering statement submitted with the JHCR Petition further states that the Jackson community "is presently served by only one non-commercial operation. . . KUWJ, channel 212, licensed to the University of Wyoming." *JHCR Petition*, Exhibit E, at 2 (hereinafter "JHCR Engineering Statement"). Therefore, according to the JHCR Engineering Statement, JHCR's

proposed new station will add a new second NCE service to the Jackson community. *JHCR Engineering Statement* at 3. University is confused by JHCR's statements.

Although KUWJ is presently the only NCE station currently on the air serving the Jackson community, there are multiple construction permits or applications for new NCE FM station serving Jackson. In fact, JHCR's Petition points out those very permits/applications in its preclusion showing. *JHCR Engineering Statement* at Figure 2. Thus, JHCR's second service showing does not seem to take into account the recently-granted permits by Broadcasting For The Challenged on Channels 202 and 206 (88.3 MHz and 89.1MHz, respectively), or the still-pending competing applications filed by Abundant Life Broadcasting and The Moody Bible Institute of Chicago for a new station at Channel 216 (91.1MHz)[1]. Once those facilities are constructed, Jackson and surrounding areas will be well served by four (4) NCE FM stations.

University assumes that JHCR intended that the Commission consider the additional NCE stations on channels 202 and 206 (and the remaining mutually exclusive applications for Channel 216), because JHCR accounted for these applications in the preclusion analysis included with its Petition. However, because the Petition failed to include any population study, University is uncertain which portions of Jackson and the surrounding areas would receive a "second" service by JHCR's proposed station once these additional stations are taken into consideration. Moreover, without the population study, it is not possible to assess whether other stations (licensed to communities other than Jackson) would serve portions of the JHCR proposed service area.

According to University's Engineering Study, Jackson and the vast majority of the populated areas surrounding Jackson are already destined to receive a second NCE service from

[1] *See* FCC File No. BPED-19981231MI (KNIL(FM), (Jackson, WY), Channel 202 (88.3MHz)); FCC File No. BPED-19981231MK (KURT(FM), (Jackson, WY), Channel 206 (89.1 MHz)); and FCC File Nos. BPED-19990301MA and BNPED-19991214ACD (NCE FM stations at Jackson, WY on Channel 216 (91.1 MHz)).

the granted permits for KNIL(FM) and KURT(FM). *See* Engineering Statement attached at Appendix A. Thus, according to the Engineering Study, only a few scattered areas outside of the Jackson Valley would receive new second service under JHCR's proposal, and the population in those areas numbers only 33 persons. *See* Appendix A. This "count" falls short of the "ten percent" standard and does not meet the 2,000 person minimum.

2. JHCR's Proposed "First" Service Areas

JHCR's Petition also claims that its proposed station will provide first NCE service to areas outside the KUWJ service area amounting to 35% of its proposed service area. *JHCR Engineering Statement* at 3. Because the JHCR Petition and Engineering Statement did not include documentation supporting its calculations, the University is unable to determine from JHCR's Petition where the precise areas of new first service would be, or how the 35% calculation was determined. For example, it is not clear whether the JHCR Engineering Statement takes into account the contours of the two NCE station permits recently awarded for Stations KNIL(FM) and KURT(FM), or other NCE stations that provide a service contour over portions of the proposed new first NCE service area.

Based on University's assessment, areas of new first service (if any) would largely fall on sparsely populated (or unpopulated) National Forest Service, National Park, and National Elk Refuge lands outside the Jackson Valley. *See* U.S. Geological Survey map of federal lands in Wyoming, attached at Appendix B.

Furthermore, no matter what percentage of the proposed station's service area constitutes first NCE service, the critical legal standard is the number of persons who would receive the first service. The Petition fails to include any documentation or studies about the number of people who would receive NCE "first" service from JHCR's proposal. Without the corresponding

population counts for the proposed first service area, it is not possible to assess whether JHCR has met the relevant legal standards (i.e., whether the first service area comprises at least 10% of the total population served, and whether the area includes the minimum number (2000 people) required to justify reservation as an NCE station.)

In fact, University's own population counts for the proposed station's service area outside of the KUWJ contour show that only 785 persons would receive a new first service—far short of the Commission's required "ten percent" standard and the 2000 person minimum. Moreover, based on University's study, the additional 818 persons (total) receiving new first or second service from JHCR's proposal, account for only 4.8% of the total population within the proposed station's contour, which still remains far less than the 10% of the total population required by the FCC and less than the 2000 person minimum. *See* Appendix A.

3. Other Matters

Station KUWJ broadcasts from a transmitter located at the same site—Snow King Mountain—that JHCR plans to use as the tower location for its proposed station. Thus, University has experience using this particular transmission site. As JHCR correctly points out, Snow King Mountain is the "only viable" location for a broadcast transmitter serving the Jackson community. *JHCR Engineering Statement* at 2. Even at the proposed high power levels of 10kW for JHCR's new station, however, University is uncertain how the station will be able to serve residents living beyond KUWJ's contour by using a transmitter located on the same mountain site. As JHCR's own Engineering Statement points out on page 8, signal quality outside the Jackson valley from the Snow King Mountain site is "scattered and poor quality." As discussed above, University's engineering analysis confirms that the only places outside of KUWJ's contour that JHCR's proposed station would reach would be scattered, remote areas

largely east of the Idaho border, in sparsely populated areas on National Park, National Forest, and National Elk Refuge lands.

III. CONCLUSION

For the reasons given above, University is concerned about the soundness of JHCR's assumptions regarding first and second NCE service populations, as well as the feasibility of JHCR's reservation proposal. University therefore respectfully submits these comments for the Commission's consideration.

THE UNIVERSITY OF WYOMING

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May 5, 2005

APPENDIX A

Doug Vernier
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Telecommunications Consultants

ENGINEERING STATEMENT

In support of
Comments filed by the University of Wyoming
Concerning

Jackson, WY Channel 294C2
Reservation as NCE-FM Reserved Allocation

We have been asked by the University of Wyoming to examine the proposal by Jackson Hole Community Radio to amend the Table of Allotments, 47 C.F.R. § 73.202(b), to allot Channel 294C2 at Jackson, Wyoming, and to reserve it for noncommercial educational ("NCE") use. JHCR claims that its proposed station will "provide a second NCE service to significantly more than 10% of the population within the station's service area."

Due to the terrain blockage, the actual signal strength in the northwest portion of the coverage area would be considerably less than that predicted by the FCC method. We performed a first/second service study for the proposed facility at Jackson, using terrain adjusted methodology. We completed a Longley-Rice[1] (L-R) coverage study, and applied the L-R first occurrence 60 dBu contours. First occurrence of a L-R contour is the point along each radial where the predicted signal strength first drops below the desired signal, in this case the 60 dBu.

We calculate that there are a total of 17,125[2] people within the 60 dBu first occurrence L-R coverage area, with first and second service being supplied to only 818 people, which is 4.8% of the total. This does not meet the 10% first/second service standard or the minimum of 2,000 persons, as specified in the Second Report and Order in *Reexamination of the Comparative Standard for Noncommercial Educational Applicants*, 18 FCC Rcd 6691 (2003).

Attachment A is a First and Second Service map and population report, using Longley-Rice calculated first occurrence 60 dBu contours.

Page #3 of this statement is a declaration of the qualifications of its preparer, Kate Michler.

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[1] **An overview of the Longley-Rice Model:** In the mid-sixties, the National Bureau of Standards published Technical Note 101. P. L. Rice, A. G. Longley, A. Norton and A. P. Barsis authored this two-volume propagation treatise in the course of their work at the Institute for telecommunications Sciences and Aeronomy at Boulder, Colorado. The concepts expressed in

these documents were incorporated into a series of computer routines that came to be known as the "Longley-Rice Model". This model has recently been employed by the Commission to determine the new DTV allocation scheme. It has now become the standard alternative prediction method. Going well beyond the FCC curves, the Longley-Rice method considers atmospheric absorption including absorption by water vapor and oxygen, loss due to sky-noise temperature and attenuation caused by rain and clouds. It considers terrain roughness, knife-edge, (with and without ground-reflections), loss due to isolated obstacles, diffraction, forward scatter and long-term power fading. The following inputs for analysis based on multiple point-to-point paths were used in the determination of the Longley-Rice first occurrence 60 dBu F(50-50) contour:

Frequency (88.3MHz)

Transmitter antenna height (above mean sea level = 2,480 meters.)

Transmitter antenna height (above ground = 48 meters.)

Transmitter power (2.35 kW)

Transmitter antenna pattern. (Omni-directional).

Receiver antenna height (above ground = 9.1 meters)

System antenna polarization (horizontal)

System Ground Conductivity (mhoS/m) = .008 (Average ground)

System dielectric constant (Permitivity) = 5.0 (Average ground)

System minimum monthly mean surface refractivity (Adjusted to sea level.) =300 (from map, N-units.)

Climate Code = 5 (Continental temperate - default for U.S. continent)

Probability Factors:

Qt = (Time variability) The percentage of time the actual path loss is equal or less than the predicted path loss (50%)

Qc = (Prediction Confidence or "Quality") The percentage of the measured data values the model is based on that are within the predicted path loss. (50%)

[2] 2000 US Census (SF1)

Declaration:

I, Katherine A. Michler, have received a Bachelor of Science degree from the University of Northern Iowa, and;

That, I declare that I have received training as a technical consultant as a member of the staff of Doug Vernier Telecommunications Consultants, and;

That, I have apprenticed under Douglas Vernier for over seven years, and;

That, he has been active in broadcast consulting for over 30 years, and;

That, his qualifications are a matter of record with the Federal Communications Commission, and;

That, I am an Associate Member (#20792) of the Society of Broadcast Engineers, Indianapolis, Indiana, and;

That, the consulting firm of Doug Vernier Telecommunications Consultants has been retained by the University of Wyoming, Laramie;

That, I have personally prepared these engineering showings, the technical information contained in same and the facts stated within are true to my knowledge, and;

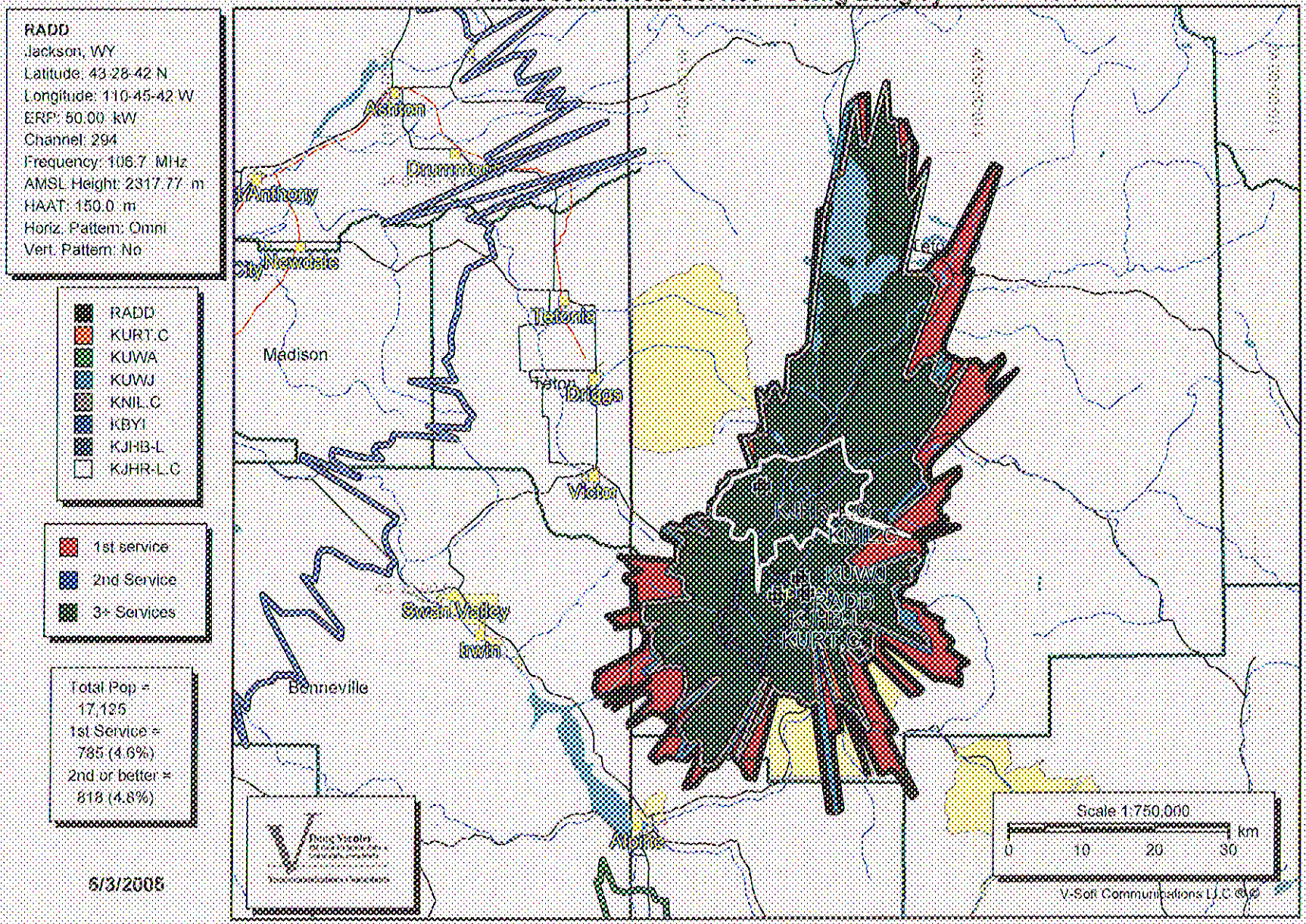
That, under penalty of perjury, I declare that the foregoing is correct.

Katherine A. Michler

Executed on May 4, 2005

Attachment A

First/Second NCE Service - Using Longley-Rice First Occurrence 60 dBu



Service Count Population Report

Jackson 294C2

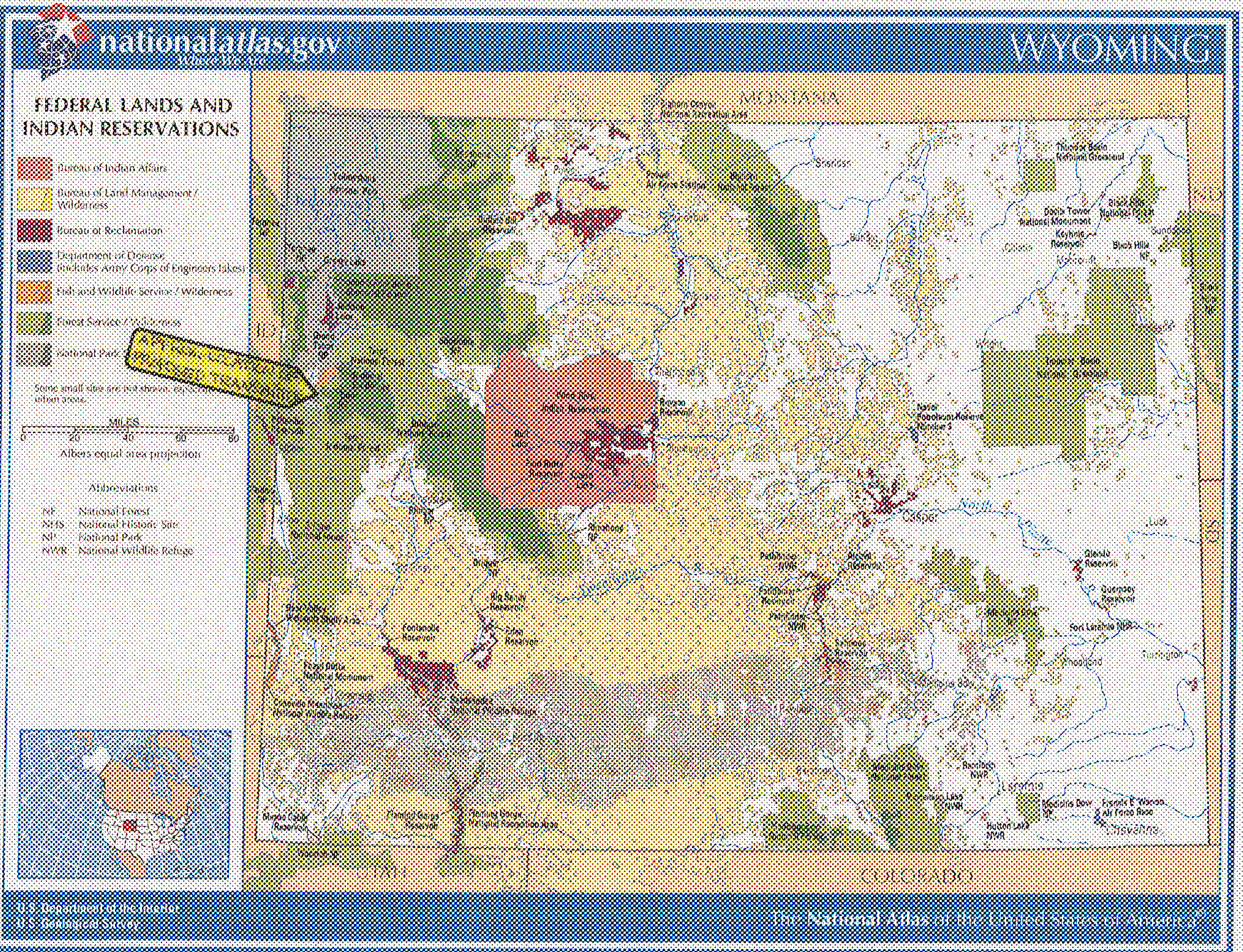
Longley-Rice First Occurrence 60 dBu Contours

Stations considered:
KURT.C
KUWA
KUWJ
KNIL.C
KBYI
KJHB-L
KJHR-L.C

Population Database: 2000 US Census (SF1)

	Service Pop	Running Total	%
1st Service	785	785	4.6
2nd Service	33	818	4.8
3rd Service (or >)	16,307	17,125	100.0

APPENDIX B


nationalatlas.gov
WYOMING
FEDERAL LANDS AND INDIAN RESERVATIONS
Bureau of Indian Affairs
Bureau of Land Management / Wilderness
Bureau of Reclamation
Department of Defense (includes Army Corps of Engineers lakes)
Fish and Wildlife Service / Wilderness
Forest Service / Wilderness
National Park
MILES
Albers equal area projection
Abbreviations
NF National Forest
NHS National Historic Site
NP National Park
NWR National Wildlife Refuge
MONTANA
COLORADO
Casper
Cheyenne
Wind River Indian Reservation
Thunder Basin National Grassland
Devils Tower National Monument
Black Hills NF
Fort Laramie NHS
U.S. Department of the Interior
U.S. Geological Survey
The National Atlas of the United States of America

CERTIFICATE OF SERVICE

I, Sue Fischer, hereby certify that copies of the foregoing Comments have been served by Hand Delivery or by First Class United States Mail this 5th day of May, 2005, on the following:

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